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MEMORANDUM FOR THE RECORD

SUBJECT: Methods of Computing the Percentile Factor of
the U-2's Vulnerability to MIG-21F's Armed
with the Soviet AA-2 Infrared Missile

REFERENCE: BYE 22053-64 - U-2 Vulnerability Study, "The
MIG-21F/U-2 Encounter"

1. Until just recently, when the Office of Scientific Intelligence completed the referenced study, the subject of the U-2's vulnerability to MIG-21 aircraft has been the cause for much speculation and varied opinions. This study for the first time gave the operators basic guide lines from which a percentile factor could be computed that would express graphically the U-2's vulnerability against any known MIG-21 AOB situation. However, it must be emphasized that this study's findings are based upon qualifying factors (perfect pilotage, a well maintained aircraft, 10 seconds for the interceptor pilot to visually acquire the U-2 and fire his missile), that are not constants. If these factors are changed to any degree, they greatly influence (decrease) the degree of vulnerability of the U-2 to the MIG-21. This is effectively stated throughout this study and summarized in the last paragraph as: "The results of this study represent the highest probability of successful intercept of the U-2 by the FISHBED C/E which is equipped with the HIGH FIX range only radar, assuming excellent aircraft performance. Under average conditions a lower probability of intercept would be expected." To put it in the words of the undersigned: "If the figures quoted on page 5 of the referenced memorandum, on the probability of successful launch, were taken alone they would have a tendency to give the impression to the uninformed that the MIG-21 interceptor capabilities are much better than they actually are". In subsequent paragraphs the undersigned will use the launch probability figures, from page 5 of the study, and will label them as "Dash Detergent Factors" (they make the MIG-21 ten feet tall).

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